

AMENDMENTS TO THE SPECIFICATION

Please amend the original specification as filed on November 12, 2003 and as amended on February 1, 2005 by replacing the following paragraph on lines 16-17 of REPLACEMENT PAGE 2 of the specification with the following two paragraphs; this amendment is presently reflected in the enclosed substitute specification:

Replace:

Figure 4A shows a carrier vessel which has approached a FPSO process vessel for temporary mooring and offloading thereto;

with:

Figure 4A is a top view showing ~~shows~~ a carrier vessel which has approached a FPSO process vessel for temporary mooring and offloading thereto;

Figure 4B is a side view showing a carrier vessel which has approached a FPSO process vessel for temporary mooring and offloading thereto;

Please amend the original specification as filed on November 12, 2003 and as amended on February 1, 2005 by replacing the following paragraph on lines 7-25 of REPLACEMENT PAGE 5 of the specification with the following rewritten paragraph; this amendment is presently reflected in the enclosed substitute specification:

Replace:

Figures 15 through 18 illustrates another embodiment of the invention where a rope winch 100' is positioned not on the yoke itself, but on the stern of the vessel 1 in the vicinity of winch 11a but near the centerline of vessel 1. The tension member 110 in this embodiment is a high strength synthetic fiber rope as described above, and is wound around rope sheaves 140, 142 and 144 and is terminated in an end fitting 19' as shown in Figure 16B. Figure 16A illustrates the receiver 34' carried by extension or connection module 8. A hydraulic

connector 42' is secured on connection module 8 to selectively capture end fitting 19' when it is pulled upward by messenger line 40' similar to the illustration of Figures 2B and 3. Figure 16C illustrates, in a cross-section cut away elevation drawing, the mating cone 32' via cone extension member 32'' locked in the connector 42' after it has been fully pulled in and locked. The mating cone 32' is carried on a two-axis gimbaled joint 90 with an internal vertical axis yaw bearing 91 which allows the cone 32' and cone extension member 32'' to rotate about a vertical axis through a center line through pedestal 35. An elastomeric flex joint can be substituted for the two-axis gimbaled joint. Such a flex joint can be a universal type (Hooke's joint) or a tapered stress joint of metallic or composite construction, or a flex joint 92 (see Figure 16D) using metallic or composite materials. Cone extension member 32'' is sized to allow rope 110 to pass through its center (see Figure 16B) and has an outer profile 92 arranged with grooves so that locking members or dogs 80 of connector 42 can lock yoke tip 15' to receiver 34'.

with:

Figures 15 through 18 illustrates another embodiment of the invention where a rope winch 100' is positioned not on the yoke itself, but on the stern of the vessel 1 in the vicinity of winch 11a but near the centerline of vessel 1. The tension member 110 in this embodiment is a high strength synthetic fiber rope as described above, and is wound around rope sheaves 140, 142 and 144 and is terminated in an end fitting 19' as shown in Figure 16B. Figure 16A illustrates the receiver 34' carried by extension or connection module 8. A hydraulic connector 42' is secured on connection module 8 to selectively capture end fitting 19' when it is pulled upward by messenger line 40' similar to the illustration of Figures 2B and 3. Figure 16C illustrates, in a cross-section cut away elevation drawing, the mating cone 32' via cone extension member 32'' locked in the connector 42' after it has been fully pulled in and locked. The mating cone 32' is carried on a two-axis gimbaled joint 90 with an internal vertical axis

yaw bearing 91 which allows the cone 32' and cone extension member 32" to rotate about a vertical axis through a center line through pedestal 35. An elastomeric flex joint can be substituted for the two-axis gimbaled joint. Such a flex joint can be a universal type (Hooke's joint) or a tapered stress joint of metallic or composite construction, or a flex joint [92]93 (see Figure 16D) using metallic or composite materials. Cone extension member 32" is sized to allow rope 110 to pass through its center (see Figure 16B) and has an outer profile 92 arranged with grooves so that locking members or dogs 80 of connector 42 can lock yoke tip 15' to receiver 34'.

Please amend the original specification as filed on November 12, 2003 by replacing the following paragraph on line 23 page 5 of the specification with the following three paragraphs; this amendment is presently reflected in the enclosed substitute specification:

Replace:

92 Outer profile of guide cone extension

with:

91 Yaw bearing

92 Outer profile of guide cone extension

93 Flex joint

Please amend the original specification as filed on November 12, 2003 by replacing the following paragraph on lines 9-20 page 6 of the specification with the following rewritten paragraph; this amendment is presently reflected in the enclosed substitute specification:

Replace:

Figures 2A and 2B show one embodiment of the invention of disconnectable mooring yoke 10 including hinge joints 14a and 14b, yoke frame 16, buoyant chamber 28, chain

windlass 18, and guide cone 32 mounted on yoke 16 by a three-axis flexible joint 30. Chain 20 can be run out of, or retrieved into, chain locker 24 by rotationally powered chain pocket wheel 21. Chain guide wheel 22 maintains sufficient wrap of chain 20 around pocket wheel 21. Chain guide wheels 26a and 26b maintain chain 20 alignment around and upward through guide cone 32. The preferred connection of the yoke 10 to the LNG/FPSO 1 is described in provisional application 60/401,478 filed on August 6, 2002, now U.S. Application 10/636,994 filed on August 6, 2003 which is incorporated herein by reference. The frame 5 of the FPSO 1 to which the pantograph connection 4 is mounted is described in provisional application 60/408,274 filed on September 6, 2002, also now U.S. Application 10/636,994 filed on August 6, 2003, which is also incorporated herein by reference.

with:

Figures 2A and 2B show one embodiment of the invention of disconnectable mooring yoke 10 including hinge joints 14a and 14b, yoke frame 16, buoyant chamber 28, chain windlass 18, and guide cone 32 mounted on yoke 16 by a three-axis flexible joint 30. Chain 20 can be run out of, or retrieved into, chain locker 24 by rotationally powered chain pocket wheel 21. Chain guide wheel 22 maintains sufficient wrap of chain 20 around pocket wheel 21. Chain guide wheels 26a and 26b maintain chain 20 alignment around and upward through guide cone 32. The preferred connection of the yoke 10 to the LNG/FPSO 1 is described in provisional application 60/401,478 filed on August 6, 2002, now U.S. Application 10/636,994 filed on August 6, 2003 and published on February 12, 2004 as U.S. Patent Application Publication No. U.S. 2004/0094082, which is incorporated herein by reference. The frame 5 of the FPSO 1 to which the pantograph connection 4 is mounted is described in provisional application 60/408,274 filed on September 6, 2002, also now U.S. Application 10/636,994 filed on August 6, 2003 and published on February 12, 2004 as U.S.

Patent Application Publication No. U.S. 2004/0094082, which is also incorporated herein by reference.